

4-H Healthy Living Logic Model – Improved Nutrition Intake and Healthy Eating

SITUATION

Weight gain and obesity among young people are prevalent concerns and the “poor eating patterns established in childhood [can] transfer to adulthood,” (*America’s Children: Key National Indicators of Well-Being* (2009), p. 64). The percentage of children (6-11 years of age) and adolescents (12-19 years of age) who are overweight and obese has risen since 1976-1980. The American Academy of Pediatrics and Centers for Disease Control and Prevention now recognize those children with a BMI for age between the 85th and 95 percentile as overweight and those above the 95 percentile as obese. In 2005-2006, 33.3% of children ages 6-11 and 34.1% of children 12-19 in the United States were considered overweight or obese, specifically 17.0% and 17.6%, respectively were considered obese (Ogden et al., 2008). The nation’s tremendous concern related to the nutrition intake and healthy eating of its youth is illustrated by the continuation of the former Healthy People 2010 objective to “reduce the proportion of children and adolescents who are overweight or obese” (19.3) in the Healthy People 2020 plan (US HHS, 2009).

According to the USDA Center for Nutrition Policy and Promotion (2009), “The quality of children’s and adolescents’ diets is a vital issue because poor eating patterns established in childhood may transfer to adulthood. Such patterns are major factors in the increasing rate of childhood obesity and are contributing factors to related health concerns,” (paragraph 1). In addition, nutrition-related diseases that were once considered adult illnesses, such as type 2 diabetes and high blood pressure are increasingly diagnosed in children.

Simply, the nutrition intake of children and youth (ages 2-17 years of age) needs improvement. Particularly, young people need to eat more whole fruit, whole grains, legumes, and dark green and orange vegetables. On the other hand, children need to eat less saturated fats and added sugars in diet. (Center for Nutrition Policy and Promotion, 2009 and Federal Interagency Forum on Child and Family Statistics, 2009).

4-H Healthy Living programs will help young people develop more healthful diets, choose healthy food and snacks closer to the dietary recommendations, and become wise consumers of food-related media. Families should also be involved in establishing those healthy eating habits by: a) planning nutritious meals; b) modeling healthy eating; c) encouraging children and youth to make wise decisions when food and snack choices are available; and d) ensure healthy food options are available in the home. Ultimately, the goal is for all family members to establish and maintain lifelong healthy eating behaviors.

Awareness of dietary quality, having access to healthy foods, and making smart food choices are necessary to improve nutritional health of youth and their families. According to the Society for Nutrition Education (2009) in order to improve eating habits programs should:

- a) target specific behaviors/practices,
- b) focus on the interests and motivations of youth,

- c) devote sufficient time and intensity to interventions,
- d) involve multiple strategies using a social ecological approach and
- d) provide professional development to staff

4-H HEALTHY LIVING LOGIC MODEL DETAILS

- *Outcomes appropriate for children ages 5-9 are noted as **(child)***
- *Outcomes appropriate for youth ages 10-19 are noted as **(youth)***
- *Outcomes appropriate for are noted as **(family)***
- *Outcomes appropriate for community are noted as **(community)***

OUTCOMES:

Short – Learning (Knowledge, Attitudes, Skills, Aspirations – KASA)

Children & Youth have the knowledge and skills necessary to choose foods consistent with MyPyramid recommendations.

Indicators

- (child, youth, family) know how to choose food according to MyPyramid and Dietary Guidelines
- (child, youth, family) have a more positive attitude toward healthful foods and/or are willing to try new foods
- (child, youth, family) set goals to improve their dietary practices

Children, Youth, and Families have knowledge and skills to handle food safely.

Indicators

- (child, youth, family) are more aware of the importance of safe food handling (hand washing, cross contamination, safe food temperatures & clean kitchen area)

Children, Youth, and Families have knowledge and skills necessary to make good choices when buying food.

Indicators

- (youth, family) set goals to improve their food resource management practices (meal planning, comparing sources, and pricing when food shopping)

Children, Youth, and Families have knowledge and skills necessary to prepare simple nutritious affordable food

Indicators

- (child, youth, family) know how to follow recipes correctly and safely
- (child, youth, family) know how to use knives and other kitchen tools correctly and safely

Mid – Actions (Behavior)

Children, Youth, and Families adopt and practice food selection behaviors consistent with MyPyramid recommendations.

Indicators

- (child, youth, family) eat nearer to the recommended MyPyramid amounts (grains, fruits, vegetables, milk, meat & beans, and oils)
- (child, youth, family) eat with the family more often (Gillman, M.W., Rifas-Shiman, S.L., Frazier, A.L., Rockette, H.R.H., Camargo, C.A., Field, A.E., Berkey, C.S., & Colditz, G.A., 2000).
- (family, community) influence healthy foods and snack choices in the home and neighborhood
- (child, youth, family) eat breakfast daily

Children, Youth and Families adopt and practice behaviors that are necessary to handle food safely.

Indicators

- (child, youth, family) wash their hands properly and when necessary
- (youth, family) keep the kitchen work area clean and avoid cross-contamination
- (child, youth, family) keep foods at safe temperatures
- (child, youth, family) avoid foods from unsafe sources

Children, Youth and Families adopt and practice behaviors necessary to prepare simple nutritious affordable food.

Indicators

- (youth, family) use good meal planning/food shopping practices
- (child, youth, family) use knives and other kitchen tools correctly and safely
- (child, youth, family, community) have healthful foods available at home and in the neighborhood
- (youth, family, community) prepare simple, nutritious, and affordable food

Long – Conditions

- (child, youth, family) reduced proportion of children and adolescents who are overweight or obese
- (child, youth, family) maintained healthy eating habits and decreasing health-related problems and costs

ACTIVITIES

Who We Target (Audiences)

- Youth (with special focus on new and underserved), families, staff, volunteers, community leaders, partner organizations, and collaborators

What We Do (Activities)

- Provide group meetings and educational trainings for youth, families and community partners.
- Design and implement programs with multiple components such as using environmental changes, policy changes, social marketing campaigns, curricula that meet nutrition education standards for skill-building and self-efficacy and involve families in meaningful ways.

- Promote the availability of healthier foods in communities (e.g., improve zoning and transportation policies to make supermarkets, grocery stores, and farmers markets more accessible in communities) (Institutes of Medicine, 2009, & US HHS CDC 2009).

OUTPUTS

What We Produce (Tangible Products)

- cooperative and experiential learning, peer mentoring, family engagement, non-formal educational programs, projects, trainings, workshops, internships and apprenticeships, applied research, evaluations, convened coalitions, grant proposals developed and awarded, needs assessments, social marketing campaigns disseminate and replicate programs, publish curricula and peer-reviewed articles/resources.

(Adapted from: Society for Nutrition Education, 2009. *State of Nutrition Education & Promotion for Children & Adolescents*)

INPUTS

- Evidence-based and evidence-informed curricula
- Tradition, prestige, and history of the network of Land Grant and Public Universities
- Human Resources (paid staff, volunteers, instructors, specialists, leaders, and stakeholders)
- Existing 4-H Youth Development and Families curricula, delivery modes, and programs
- National reports and standards (e.g., Healthy People 2020) that establish benchmarks for Healthy Living outcomes
- National partners with interest in supporting Extension's 4-H Healthy Living network
- Published and unpublished research and valid literature focused on health behaviors, health promotion, youth development, family development, and community development
- Financial supports such as grants, categorical funding, and fees
- Relationships with national, regional, state and local health experts, public health networks, and health advocates
- Facilities – local, state, and regional
- Youth leaders and partnerships with networks of young people
- Electronic resources (e.g., eXtension, web conferencing, wikis)
- Cornerstones of a Healthy Lifestyle:
 - a. Access – access to healthy foods and safe places and opportunities to engage in physical activity.
 - b. Collaboration – effective partnerships across the generations.
 - c. Science and Research – understanding the science and research behind effective health promotion strategies.
 - d. “Workforce” (volunteer and paid) – increasing the capacity of everyone participating in health promotion efforts.
 - e. Communications – increased awareness and understanding of the value of healthy living through effective, appropriate and targeted communication.

(Adapted from: *Blueprint for Nutrition and Physical Activity, 2006*. Association of State and Territorial Public Health Nutrition Directors (ASTPHND).

ASSUMPTIONS/GIVENS

- The contributions 4-H makes to positive youth development through multi-generational, mixed-gender, family-engaged, non-formal education is valuable to all youth.
- Extension can make unique contributions to the health and well-being of young people and their families.
- Young people and their families need to be involved in meaningful learning experiences
- 4-H Healthy Living program development and program implementation will focus on the risk and protective factors.
- Health behaviors are complex and there will continue to be risk and protective factors on which 4-H will have little impact.
- Youth will face an increasing amount of choices and opportunities
- 4-H Healthy Living programs will evolve.
- Youth and their families can improve their health through increased healthy living knowledge, taking advantage of resources, and reducing risk factors.
- Youth and their families have the ability to reach optimal physical, social/emotional health, and well-being.

ENVIRONMENTAL – EXTERNAL FACTORS/ORGANIZATIONAL

- Families will continue to face resource constraints (time, money, transportation, etc.).
- Demands on family time will continue to be a factor in the programs they choose to participate in over time.
- Changes in society and health practices/services/access will impact young people and their families.
- Research will continue to inform the connections between healthy living and positive youth development.
- Obesity prevention and health improvements will continue to be a core mission at the USDA/NIFA, state, and local Extension systems.
- High priority will be placed on policy change for individuals and the community.
- Peer influence (youth, family, community) has a strong influence on creating changes.

EVALUTION PLAN COMPONENTS

- Nutrition survey, health habits survey, checklist or portfolio.
- KASA (knowledge, attitudes, skills and aspirations/ intentions) data gathered via surveys, focus groups, interviews.
- Health behavior change and health behaviors maintenance data gathered via surveys, focus groups, interviews, case studies, and reports from trained observers

- Learner self-reports focused on outcomes.
- Program effectiveness RE-AIM data (Glasgow R.E., Vogt, T. M., & Boles, S. M. [1999]).
- Process evaluations/accomplishments.
- Monitor existing trend and surveillance data from other studies and networks.
- Youth risk survey, portfolio of activities and life changes.
- Monitor (Extension Service data report) ES237.
- Review of state Healthy Living plans across regions.

RESOURCES

Association of State and Territorial Public Health Nutrition Directors [ASTPHND] (2006). *Blueprint for Nutrition and Physical Activity*. Retrieved on August 1, 2009 from www.movingtothefuture.org

Federal Interagency Forum on Child and Family Statistics (2009). *America's Children: Key National Indicators of Well-Being*, US Office of Management and Budget. Retrieved August 1, 2009 from www.childstats.gov

Gillman, M.W., Rifas-Shiman, S.L., Frazier, A.L., Rockette, H.R.H., Camargo, C.A., Field, A.E., Berkey, C.S., & Colditz, G.A. (2000). Family dinners and diet quality among older children and adolescents. *Archives of Family Medicine*, 9,235-240. A questionnaire using (24 hour recall) that was mailed to children of participants in the ongoing Nurses Health Study II.

Glasgow RE, Vogt TM, & Boles SM (1999). *Evaluating the public health impact of health promotion interventions: the RE-AIM framework*. *American Journal of Public Health* vol. 89(9), p. 1322-1327.

Ogden, Cl, Carrol, MD, Flegal, KM (2008) High Body Mass Index for Age Among US Children and Adolescents, 2003-2006. *Journal of the American Medical Association*. 299:2401-2405.

Silliman, B. (2007). *Critical Indicators of Youth Development Outcomes for 4-H National Mission Mandates • Science, Engineering, and Technology • Citizenship • Healthy Living*. National 4-H Headquarters. Retrieved July 15, 2009 from http://www.national4-hheadquarters.gov/library/Indicators_4H_MM.pdf

Society for Nutrition Education (2009). *State of Nutrition Education & Promotion for Children & Adolescents*. Retrieved August 3, 2009 from http://www.sne.org/documents/SNENENPES630_exec_summary_000.pdf

US HHS (2005). Dietary Guidelines for Americans. Retrieved August 1, 2009 from www.health.gov/dietaryguidelines/dga2005/document/default.htm

US HHS (2009). Healthy People 2020: Update of and Healthy People 2010. Retrieved on Nov. 6, 2009 from www.healthypeople.gov/HP2020/Objectives/TopicAreas.aspx

US HHS CDC (2009). *State Indicator Report on Fruits and Vegetables – National Action Guide*. Retrieved August 1, 2009 from <http://www.fruitsandveggiesmatter.gov/downloads/NationalActionGuide2009.pdf>

US HHS CDC (2008). *School Health Index*. Retrieved August 1, 2009 from www.cdc.gov/HealthyYouth/SHI/introduction.htm

US HHS CDC National Center for Health Statistics (2007). *Chartbook on Trends in Health of Americans*. Retrieved August 1, 2009 from <http://www.cdc.gov/nchs/data/hus/hus08.pdf#listfigures>

US HHS CDC National Center for Health Marketing [NCHM], (2009). *The Community Guide: What Works to Promote Health*. Retrieved August 1, 2009 from www.thecommunityguide.org/index.html

USDA Center for Nutrition Policy and Promotion (2009). *The Quality of Children's Diets in 2003-04 as Measured by the Healthy Eating Index-2005*. *Nutrition Insight* 43, April 2009. Retrieved August 1, 2009 from <http://www.cnpp.usda.gov/Publications/NutritionInsights/Insight43.pdf>.

US National Institutes of Medicine (2009). *Local Government Actions to Prevent Childhood Obesity*. Washington. DC. Retrieved August 1, 2009 from www.iom.edu/CMS/3788/59845/72798.aspx